

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

1. (Currently Amended) An apparatus ~~for inducing~~ that induces emotions based on detection of biosignals from a body of a user and on emotion induction protocols ~~for that~~ selectively ~~controlling~~ control visual, auditory, olfactory and tactile stimuli, comprising:

an emotion induction module ~~for selecting~~ that selects from a plurality of emotion induction protocols an emotion induction protocol ~~capable of inducing~~ configured to induce a desired emotion selected by the user, ~~extracting~~ extracts one or more bioparameters from the biosignals, and ~~changing~~ changes the emotion induction protocol depending on increase/decrease patterns of the respective extracted bioparameters so as to induce the emotion, wherein each emotion induction protocol is configured to induce a different emotion by combining contents ~~capable of inducing~~ that induce cognitive action of the central nervous system and conditions ~~capable of inducing~~ that induce physiological action of the autonomic nervous system;

a biostimulation module ~~for outputting~~ that outputs physical signals ~~for applying~~ that apply the stimuli to the user's body based on the selected emotion induction protocol; and

a biosignal measurement module ~~for detecting~~ that detects one or more biosignals from the user's body and ~~outputting~~ outputs them to the emotion induction

module before and after the output of the physical signals from the biostimulation module.

2. (Currently Amended) The apparatus as claimed in claim 1, wherein the emotion induction protocols are ~~capable of inducing~~ configured to induce at least two or more of the emotions of pleasure, sadness, anger, fear, disgust and surprise.

3. (Currently Amended) The apparatus as claimed in claim 1, wherein the emotion induction module comprises a bioparameter change model storage unit in which change models for the respective bioparameters by emotional states are stored, an emotion induction protocol storage unit in which the emotion induction protocols ~~capable of inducing~~ configured to induce physiological signals for the emotional states are stored, and an emotion induction control unit ~~for comparing that~~ compares the increase/decrease patterns of the respective bioparameters extracted from the biosignals with the bioparameter change models and ~~changing~~ changes the emotion induction protocols depending on comparison results.

4. (Currently Amended) The apparatus as claimed in claim 3, wherein the conditions ~~capable of inducing~~ that induce physiological action of the autonomic nervous system include illumination, fragrance and temperature/humidity.

5. (Currently Amended) The apparatus as claimed in claim 4, wherein each emotion induction protocol is configured ~~in such a manner~~ so that the contents and the conditions of illumination, fragrance and temperature/humidity are graded

according to the respective bioparameters into various levels in order of ~~capability to~~  
~~induce a degree to which the contents and the conditions induce~~ an increase pattern  
of the bioparameters.

6. (Previously Presented) The apparatus as claimed in claim 3, wherein  
the emotion induction control unit compares the increase/decrease patterns of the  
respective bioparameters extracted from the biosignals with the bioparameter  
change models, extracts deviations of the increase/decrease patterns of the  
respective bioparameters from the bioparameter change models, and checks  
whether the user has reached the desired emotional state based on the deviations of  
the increase/decrease patterns of the respective bioparameters.

7. (Previously Presented) The apparatus as claimed in claim 3, wherein if  
an increase/decrease pattern of only one bioparameter among the bioparameters  
extracted from the biosignals does not conform to the bioparameter change model,  
the emotion induction control unit changes a level of the non-conforming  
bioparameter in the emotion induction protocol.

8. (Previously Presented) The apparatus as claimed in claim 3, wherein if  
increase/decrease patterns of a plurality of bioparameters among the bioparameters  
extracted from the biosignals do not conform to the bioparameter change models,  
the emotion induction control unit changes levels of bioparameters, which are  
selected according to priorities of changes in the bioparameters, in the emotion  
induction protocol.

9. (Original) The apparatus as claimed in claim 8, wherein the priorities of changes in the bioparameters are set in order of induction facilitation of the bioparameters for a relevant emotion induction.

10. (Previously Presented) The apparatus as claimed in claim 3, wherein if increase/decrease patterns of all the bioparameters extracted from the biosignals do not conform to the bioparameter change models, the emotion induction control unit changes the contents of the emotion induction protocol.

11. (Original) The apparatus as claimed in claim 1, wherein the physical signals outputted from the biostimulation module stimulate at least one of the visual, auditory, olfactory and tactile senses.

12. (Currently Amended) The apparatus as claimed in claim 1, wherein the biosignal measurement module comprises a sensor unit ~~for detecting~~ that detects one or more biosignals from the user's body, and the sensor unit includes a heartbeat detection sensor ~~for detecting~~ that detects a heartbeat biosignal from the user's body and a skin resistance sensor ~~for measuring~~ that measures skin resistance of the user's body.

13. (Original) The apparatus as claimed in claim 12, wherein bioparameters for the number of heartbeats and a variation of the heartbeat are

extracted from the heartbeat biosignal, and a bioparameter for the skin resistance is extracted from a skin resistance biosignal.

14. (Currently Amended) The apparatus as claimed in claim 1, wherein the biosignal measurement module further comprises a signal processing unit ~~for amplifying that amplifies~~ and ~~filtering filters~~ the detected biosignals, an analog/digital conversion unit ~~by which if the detected biosignals are in the form of analog signals, that converts the analog detected biosignals are converted into digital signals if the detected biosignals are in the form of analog signals,~~ and a radio signal transmitter ~~for converting that converts~~ the digital biosignals outputted from the analog/digital conversion unit into radio signals and ~~transmitting transmits~~ the radio signals.

15. (Currently Amended) A method for inducing emotions based on emotion induction protocols ~~capable of that~~ selectively ~~controlling control~~ visual, auditory, olfactory and tactile stimuli, comprising the steps of:

selecting from a plurality of emotion induction protocols an emotion induction protocol ~~capable of inducing~~ configured to induce a desired emotion selected by a user, wherein each emotion induction protocol is configured to induce a different emotion by combining contents ~~capable of inducing~~ that induce cognitive action of the central nervous system and conditions ~~capable of inducing~~ that induce physiological action of the autonomic nervous system;

detecting one or more biosignals from the user's body and extracting one or more bioparameters from the detected biosignals;

outputting physical signals ~~for stimulating~~ that stimulate the user's body based on the emotion induction protocol ~~capable of inducing~~ configured to induce the selected emotion;

after ~~the output of~~ outputting the physical signals, detecting one or more biosignals from the user's body and extracting one or more bioparameters from the detected biosignals; and

inducing the emotion by changing the emotion induction protocol based on increase/decrease patterns of the bioparameters extracted from the biosignals.

16. (Currently Amended) The method as claimed in claim 15, wherein the emotion induction protocols are ~~capable of inducing~~ configured to induce at least two or more of the emotions of pleasure, sadness, anger, fear, disgust and surprise.

17. (Currently Amended) The method as claimed in claim 15, wherein the conditions ~~capable of inducing~~ that induce physiological action of the autonomic nervous system include illumination, fragrance and temperature/humidity.

18. (Currently Amended) The method as claimed in claim 17, wherein each emotion induction protocol is configured ~~in such a manner~~ so that the contents and the conditions of illumination, fragrance and temperature/humidity are graded according to the respective bioparameters into various levels in order of ~~capability to induce~~ a degree to which the contents and the conditions induce an increase pattern of the bioparameters.

19. (Original) The method as claimed in claim 15, wherein the physical signals stimulate at least one of the visual, auditory, olfactory and tactile senses.

20. (Original) The method as claimed in claim 15, wherein the biosignals include biosignals for heartbeat and skin resistance of the user's body.

21. (Original) The method as claimed in claim 20, wherein bioparameters for the number of heartbeats and a variation of the heartbeat are extracted from the heartbeat biosignal, and a bioparameter for the skin resistance is extracted from the skin resistance biosignal.

22. (Currently Amended) The method as claimed in claim 15, wherein the detected biosignals are amplified and filtered; if the detected biosignals are in the form of analog signals, the step of detecting further comprises the steps of converting the analog biosignals are converted into digital biosignals; and converting the digital biosignals are converted into radio signals which in turn are transmitted and transmitting the radio signals.

23. (Original) The method as claimed in claim 15, wherein the step of inducing the emotion further comprises the steps of comparing the increase/decrease patterns of the extracted respective bioparameters with the respective bioparameter change models, extracting deviations of the increase/decrease patterns of the respective bioparameters from the bioparameter change models, and checking whether the user has reached a desired emotional

state based on the deviations of the increase/decrease patterns of the respective bioparameters.

24. (Previously Presented) The method as claimed in claim 18, further comprising the step of, if the user has not reached a desired emotional state, changing the contents or level of the emotion induction protocol.

25. (Previously Presented) The method as claimed in claim 24, wherein the step of changing the contents or level of the emotion induction protocol comprises the step of, if an increase/decrease pattern of only one bioparameter among the bioparameters extracted from the biosignals does not conform to the bioparameter change model, changing the level of the non-conforming bioparameter in the emotion induction protocol.

26. (Original) The method as claimed in claim 24, wherein the step of changing the contents or level of the emotion induction protocol comprises the step of, if increase/decrease patterns of a plurality of bioparameters among the bioparameters extracted from the biosignals do not conform to the bioparameter change models, changing the levels of bioparameters, which are selected according to priorities of changes in the bioparameters, in the emotion induction protocol.

27. (Original) The method as claimed in claim 26, wherein the priorities of changes in the bioparameters are set in order of induction facilitation of the bioparameters for a relevant emotion induction.



28. (Original) The method as claimed in claim 24, wherein the step of changing the contents or level of the emotion induction protocol comprises the step of, if increase/decrease patterns of all the extracted bioparameters do not conform to the bioparameter change models, changing the contents of the emotion induction protocol.

29. (Previously Presented) The apparatus as claimed in claim 5, wherein if an increase/decrease pattern of only one bioparameter among the bioparameters extracted from the biosignals does not conform to the bioparameter change model, the emotion induction control unit changes the level of the non-conforming bioparameter in the emotion induction protocol.

30. (Previously Presented) The apparatus as claimed in claim 5, wherein if increase/decrease patterns of a plurality of bioparameters among the bioparameters extracted from the biosignals do not conform to the bioparameter change models, the emotion induction control unit changes the levels of bioparameters, which are selected according to priorities of changes in the bioparameters, in the emotion induction protocol.

31. (Previously Presented) The apparatus as claimed in claim 5, wherein if increase/decrease patterns of all the bioparameters extracted from the biosignals do not conform to the bioparameter change models, the emotion induction control unit changes the contents of the emotion induction protocol.

32. (Previously Presented) The method as claimed in claim 23, further comprising the step of, if the user has not reached a desired emotional state, changing the contents or level of the emotion induction protocol.